

Definition of the Meteorology

It is a branch of ecological science, concerned with the processes and phenomena of the atmosphere, especially as a way of forecasting the weather.

1. Introduction of the lecture

- Earth is the only planet in the solar system that supports life. This is because of the three physical systems on it that is, **soil, water and air** which provide material essential for life.
- All the living beings differ from each other but they are all interdependent and interact with each other as also with, their environment directly or indirectly.

An example to start our lecture



- 1- These brilliant red “feathers” are actually animals called **tubeworms**.

2- They live in an extreme environment on the deep ocean floor, thousands of meters below the water's surface.

3- Their world is always very cold and completely dark. Without sunlight, photosynthesis is not possible.

So what do organisms eat at these depths?

Tube worms depend on chemosynthetic microorganisms that live inside them for food. Tube worms have adapted to the extreme conditions of their environment.

2. Some important Vocabulary which is relevant to the subject

- Ecology,
- Biotic factor
- Abiotic factor
- Competitive
- Decomposer
- food chain
- Food web
- Habitat
- Niche

Their Definitions:

1- Ecology is the scientific study of how **living things** interact with each other and with their environment.

2- Environment

The term environment indicates all the physical, chemical and biotic conditions surrounding and influencing a living organism.

3- Organisms are individual living things. Despite their tremendous diversity, all organisms have the same basic needs: **energy** and **matter**. These must be obtained from the environment.

The environment includes two types of factors: abiotic and biotic:

A. Abiotic factors are the non-living parts of the environment. They include factors such as:

sunlight, soil, temperature, pressure,
humidity, water, precipitation, wind,
mineral elements of soil and composition of air.

Some of these environmental factors **serve** as

- **Resources factors** (air , soil, and water),
- While others act as **controlling factors** (light, temperature and pressure).

B. Biotic factors or Living things include all living organisms found in the environment including plants, animals and microorganisms.

4- The Ecosystem :

An ecosystem is a unit of nature. It consists of all the biotic and abiotic factors in an area and their interactions. Ecosystems can vary in size. For example (A lake could be considered an ecosystem).

Suggested Questions for this lecture

Q1/ Definitions for terms which mentioned above such as (ecology , Meteorology.....)?

Q2/ Complete the following sentences ? For example:

1- Meteorology is a branch of science, concerned with the processes and phenomena of the, especially as a way of forecasting

Q3/ choose the correct option ? For example

1-are the non-living parts of the environment.

- a. Ecology , b. Abiotic factors c. Biotic factors*

Q4/ Give scientific reasons for each of the followings? For example

*1. Why **Earth** is the only planet in the solar system that supports life?*

Q5/ Classify the followings? For example

1. abiotic factors 2. Biotic factors